

Traffic Safety Facts

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National Evaluation of Graduated Driver Licensing Programs

Background

The crash rate per mile driven for 16-year-old drivers is almost 10 times the crash rate for drivers ages 30-59 and more than twice the rate of 18- to 19-year-old drivers. Graduated Driver Licensing (GDL) programs have become an increasingly popular approach to managing the serious problem of high rates of fatal and nonfatal crashes among beginning drivers.

These programs vary by State, but most are designed to provide novice drivers the opportunity to gain driving experience in less risky circumstances. They achieve this objective using various provisions. The most common provisions are: raising the age of full licensure, requiring more hours of supervised driving, restricting nighttime driving, and limiting the number of unrelated passengers permitted in the vehicle.

A typical GDL program has three phases: a learner's permit with supervised training, an intermediate period where unsupervised driving is limited to less hazardous situations, and finally a full unrestricted license phase. By the end of 2004, 41 States and the District of Columbia had instituted some form of GDL that included two phases prior to full licensure.

Prior evaluation studies of GDL programs comparing fatal crash involvement rates before and after GDL implementation in individual States have reported overall reductions in crash rates of newly licensed drivers ranging from 11 percent to 32 percent. Because the various State GDL programs incorporate different components, and because often several components are introduced simultaneously, separate evaluation of individual GDL components has not been feasible.

However, it is feasible to examine which types of GDL programs are associated with the greatest reductions in crashes in newly licensed drivers. This study was undertaken to determine both the overall impact of GDL programs and the types of GDL programs that are effective in reducing crashes.

Approach

This study analyzed fatal crash rates for 16-year-old drivers compared to drivers ages 20-24 and 25-29 (for whom the GDL program did not apply) by the number and type of GDL provisions. The seven components were: minimum age of 15 ½ for obtaining a learner permit; minimum three-month waiting period after obtaining a permit before applying for an intermediate license; minimum 30 hours of supervised driving; minimum age of 16 for obtaining an intermediate license; minimum age of 17 years for obtaining a full license; nighttime restriction; and passenger restriction.

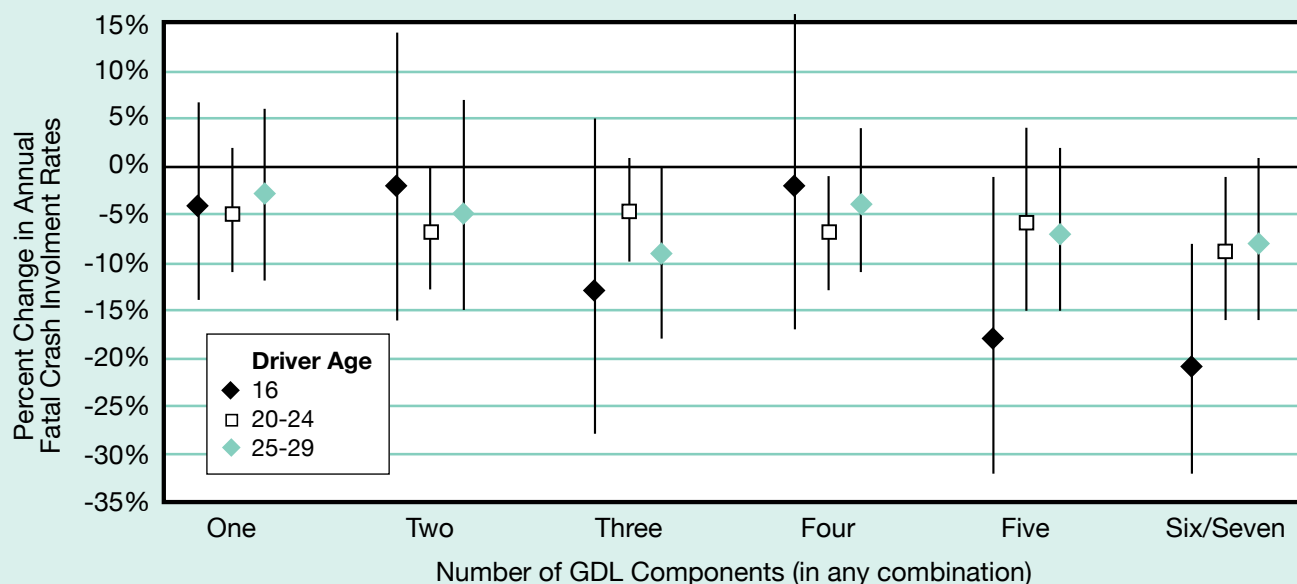
Findings

The following figure (overleaf) shows the relationship between the percent change in annual fatal crash involvement rates and the total number of program components, regardless of which specific components are included. Percent changes show differences among GDL programs with one component compared to none, two components compared to none, etc.

For 16-year-old drivers (represented by filled diamonds), one can see that programs with five or more components were associated with a significant reduction in fatal crash involvements when compared to periods when none of the components were in effect. It is also noteworthy that neither the 20-24 nor the 25-29 comparison driver age group experienced similar

Percent Change in Annual Fatal Crash Rate in Relation to Number of GDL Program Components, Compared to Having None of Seven Components, for Drivers Age 16, 20-24, and 25-29; United States, 1994-2004.

Vertical Lines Represent 95-Percent Confidence Limits.



declines in fatal crash involvement rates when these GDL programs were in effect compared to when they were not in effect.

Among existing programs that were sufficiently common for analysis, significant reductions were associated with programs having five or more components, including age requirements and:

- a waiting period of at least three months before the intermediate stage,
- a restriction on nighttime driving, and either
- thirty or more hours of supervised driving or
- a restriction on carrying passengers.

Overall, the study found an 11-percent reduction in fatal crash involvements after the GDL programs were adopted. This overall 11-percent reduction reflects the combined results for all three-stage GDL programs,

and includes States with relatively weak programs, thus diluting the overall effect. Even with this dilution, an 11-percent reduction in fatal crash involvements for 16-year-olds is substantial, and provides a strong justification for States to consider adopting these programs.

How To Order

For a copy of National Evaluation of Graduated Driver Licensing Programs (16 pages) write to the Office of Behavioral Safety Research, NHTSA, NTI-130, 400 Seventh Street SW., Washington, DC 20590, or send a fax to 202-366-7096, or download from www.nhtsa.dot.gov. The findings reported herein will also be published in the journal *Pediatrics*, by authors Li-Hui Chen, Susan P. Baker, and Guohua Li. Paul J. Tremont, Ph.D. was the NHTSA project officer.



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